

EXHIBIT A

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION**

_____)	
ORACLE AMERICA, INC.)	
)	
Plaintiff,)	
)	
v.)	Case No. CV-03561-WHA
)	
GOOGLE, INC.)	
)	
Defendant.)	
_____)	

**EXPERT REPORT OF
PROFESSOR JAMES R. KEARL
(CORRECTED March 21, 2016)**

March 18, 2016

and c) address each additional issue I believe should be evaluated in order to provide the jury with a complete and independent view of damages in this case.¹ I filed an expert report in the previous phase of this litigation and was deposed.² That report and deposition addressed, among other topics, the copyright damages that are currently at issue.

3. By an order dated December 9, 2015, the Court clarified my assignment, with the purpose of my appointment as a Rule 706 expert to provide an independent and professional analysis and view to inform and clarify the issue of damages for the jury.³
4. In carrying out my assignment, I have reviewed the expert reports of all experts filed in this phase of the litigation, but have focused my attention on the reports of Mr. Malackowski, Dr. Leonard, and Professor Jaffe.⁴
5. I assume for purposes of my analyses that Google has been found to have infringed the in-suit copyrights and that this infringement is not a Fair Use. I have no expertise in the law, in the engineering and technical aspects of the copyrights at issue in this case, or in resolving factual disputes. As such, I have tried to be very careful with regard to differences between Mr. Malackowski, Dr. Leonard, and Professor Jaffe that may turn on technical or factual disputes where economic principles or analysis provide little or no insight and have tried, in so far as possible, to focus on those areas where economic analysis provides assistance to the Court. In instances where disputed factual or legal matters have a large

¹ Order Re Rule 706 Expert, dated September 9, 2011.

² Expert Report of Professor James R. Kearl, Revised March 28, 2012; Deposition of Professor James R. Kearl, March 26, 2012.

³ Order Clarifying the Assignment of Rule 706 Expert, Document 1395, filed December 9, 2015.

⁴ Expert Report of James E. Malackowski, January 8, 2016 (Corrected); Responsive Expert Report of James E. Malackowski, February 29, 2016 (Corrected); Expert Report of Dr. Gregory K. Leonard, Corrected March 10, 2016; Rebuttal Expert Report of Dr. Gregory K. Leonard, February 29, 2016; Expert Report of Professor Adam Jaffe, Ph.D., February 8, 2016 (Corrected); Reply Expert Report of Professor Adam Jaffe, Ph.D., February 29, 2016.

impact on the damages analysis, I have endeavored to provide alternative damages estimates based on alternative assumptions about the governing law or the findings of fact.

3. Materials Relied Upon

6. Typically, an expert witness works closely with the counsel for the party who retained him. This is helpful because an expert can rely on the party's counsel to provide evidence, either supportive or not, from the record relevant to his opinions. Since I was retained by the Court and not by Google or Oracle, my ability to access the voluminous record in this case is more limited. I have assumed that because of the adversarial nature of litigation, however, all of the material in this voluminous record directly relevant to damages is contained in the experts' original, rebuttal and reply reports, revisions of reports, deposition testimony, and deposition exhibits. Hence, the universe of discovery materials with which I've worked is the documents, deposition testimony and evidence cited in the technical and damages expert reports filed in this matter, backup materials for the analyses incorporated in these reports including data collected by the experts, exhibits introduced at the depositions of experts, and the deposition testimony of the experts. I have also relied on data, computer code, and Excel worksheets provided by Mr. Malackowski and Dr. Leonard.
7. I have also conducted independent research into some economic issues that are relevant to the issues in-suit. Appendix C lists the materials available to me from the parties, as well as the materials I have independently gathered. I have cited to materials specifically relied upon in the footnotes of this report.

4. Summary of Opinions

8. Consideration of non-infringing alternatives in a disgorgement analysis makes economic sense, either explicitly or as a basis for apportionment.

- d) Dual-Home Company Apps: Apps that were written for Android, but by a company that also writes apps for iOS
- e) Dual-Language Company Apps: Apps that were written for Android, but by a company that writes other apps using the NDK.⁹⁶

63. Dr. Leonard asserts that an app fitting any one of the above five criteria is an app that would be available on Android even if Android did not use the 37 Java APIs. Basically, Dr. Leonard argues that the ability to write the app in Java would not be important to having the app available on Android since either the app was not written in Java or the developer of the app had the demonstrated ability to write apps in a language other than Java. The five criteria as presented above can be thought of as being in descending order of the probability that they would hold in the counterfactual world, with a Google app being the most likely to be available in the But-For world and a Dual-Language Company app being less likely relative to a Google app. I am not asserting a position on whether Dr. Leonard's five criteria make sense with regard to what would be available to a But-For Android phone user, but I do test the sensitivity of his results to the five criteria.

64. After imposing the five criteria for app inclusion, approximately 1,000 apps are dropped from the 3,642 Top 100 apps in the analysis (said another way, Dr. Leonard's analysis considers the impact of having removed about 23% of the apps).⁹⁷ Dr. Leonard uses the Kim model to estimate the decrease in market demand for Android phones for not having

⁹⁶ Expert Report of Dr. Gregory K. Leonard, Corrected March 10, 2016, para. 192. See also Expert Report of Dr. Gregory K. Leonard, February 8, 2016, Exhibit 2i.

⁹⁷ Dr. Leonard asserts in his deposition that he only uses the first three of the five criteria. (See Deposition of Dr. Gregory K. Leonard, March 11, 2016, pp. 370-371). This description appears to match my Scenario 2 as discussed later in this report at para. 67. However, Dr. Leonard's STATA code clearly uses all five of the criteria to arrive at his results. See Exhibit 3d.3.do from the Leonard backup materials and Expert Report of Dr. Gregory K. Leonard, Corrected March 10, 2016, para. 192.

diversion ratios. Exhibit 4a.1 shows these impacts for alternative estimates of β and σ .¹⁰³

As the β coefficient decreases, damages decrease and as β increases, the damage estimate increases; likewise, as σ moves up or down it affects damages. These effects can be seen in Exhibits 4a.1, 4a.2, 4e.1, 4e.2, and 4e.3.

72. I note that neither Mr. Malackowski nor Professor Jaffe offer an alternative estimate of the decrease in market share that would be experienced by a non-infringing Android, although some of their statements suggest that they believe a non-infringing Android would have zero market share.¹⁰⁴ In the previous phase of this litigation, Professor Cockburn estimated that the decrease in market share of a version of Android that did not use the 37 Java APIs would range from 8% to 19%.¹⁰⁵ This conclusion was based on a conjoint analysis by Dr. Shugan, wherein he tested the decrease in willingness to pay by smartphone consumers when the number of apps decreased from 100,000 to 40,000 and 6,000.¹⁰⁶ Dr. Cox adopted a mid-point of Professor Cockburn's estimates and assumed for his opinions that the reduction in market share that a non-infringing Android would experience was 13.55%.¹⁰⁷

¹⁰³ I test values of β and σ that are within a typical 95% confidence interval given the standard errors around which each are measured. The standard error on β is 0.004 (as noted in Kim's Table 2.7) and the standard error on σ is 0.075 (as noted in LEONARD0000001.pdf).

¹⁰⁴ See, for example, Reply Expert Report of Professor Adam Jaffe, Ph.D, February 29, 2016, paras. 28-29 and 35. See also Responsive Expert Report of James E. Malackowski, February 29, 2016 (Corrected), para. 60: "Assuming Android would have existed without Google's infringement is also speculative."

¹⁰⁵ Expert Report of Dr. Iain M. Cockburn, Revised September 15, 2011, para. 472. I realize that portions of the expert opinions in the previous litigation were ruled inadmissible by the Court, and that these rulings implicated some of the analyses I discuss here. To the degree my referencing of these previous analyses and conclusions is inappropriate, this discussion should be deleted.

¹⁰⁶ Expert Report of Professor Steven M. Shugan, September 12, 2011, pp. 9, 14, Appendix D, and Exhibits 3a and 4a.

¹⁰⁷ Expert Report of Dr. Alan J. Cox, Revised April 15, 2012, pp. 41 and 58.

8.1.5 Next Best Non-Infringing Alternative #5: Do Not Develop Android at All

77. Mr. Malackowski and Professor Jaffe conclude that another non-infringing alternative from Google would have been to not pursue the Android project at all. Mr. Malackowski concludes that the total profits Google has made from Android total \$22.6 billion. He then uses a 36% apportionment factor to arrive at his disgorgement damages estimate of \$8.8 billion.¹¹² Mr. Malackowski does not attempt to calculate the But-For profits that Google would have made without Android, and argues that consideration of But-For alternatives in a disgorgement analysis is inappropriate.

78. Dr. Leonard does not explicitly consider this non-infringing alternative in his disgorgement alternatives, although he does calculate the difference in Actual Google Profit (with Android) and But-For Google profit (without Android) in his Exhibit 1a.3. He concludes that the incremental profit that Google has received, from having Android, is \$7.7 billion.

79. As noted above, I believe that the correct economic method to calculate the profits attributable to the infringement is to compare actual profits to But-For profits under the next best non-infringing alternative. Thus, if the next best non-infringing alternative is “no Android” I would perform a calculation identical to that in Dr. Leonard’s Exhibit 1a.3.¹¹³ In performing this calculation, I believe Dr. Leonard is correct to deduct the total Android Engineering PM costs, Android Legal Costs, and Incremental Search and Advertising Expenses. If Google had not pursued the Android project at all, these costs would not have been incurred.

¹¹² Responsive Expert Report of James E. Malackowski (Corrected) February 29, 2016, Figures 12 and 13.

¹¹³ Dr. Leonard's Exhibits 1a.3 and 1b (iPhone Recapture Adjustment) are presented here as Exhibits 5a and 5b.